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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/440,163      | 11/15/1999  | MINORU IMURA         | 323810/98           | 2609             |

21254 7590 07/18/2005

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VIENNA, VA 22182-3817

EXAMINER

SOBUTKA, PHILIP

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2684

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/440,163             | IMURA, MINORU       |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Philip J Sobutka       | 2684                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-30 and 32-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-18 and 21-30 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,19,20 and 32-43 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. Claims 1,2,4,5,19,20,32-43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bang et al (US 6,222,873) in view of Yoon (US 6,396,868).

Consider claims 1,4,33,34,35,42, Bang et al teaches a communication apparatus wherein transmission data containing first and second signal different from the first is transmitted comprising (Bang, pilot and communication signals see especially fig 7, col 10, lines 50-60): a transmission power controller for separately controlling transmission power of the first and second signals; and a transmitter for transmitting the transmission data containing the first and second signals in the power controlled by the transmission power controller (Bang see fig 4). Note that Bang teaches one of the signals being the pilot that is controlled to be lower in power (Bang see especially col 10, lines 50-60). Bang fails to teach the communication apparatus further comprising: interleave means for rearranging sequence of the data. Yoon teaches that it is well known to use interleaving to rearrange sequence of transmitted multiplexed CDMA data (Yoon see especially col 6, lines 41-62). Yoon also teaches that use of interleaving can reduce interference to other users (Yoon see especially col 7, line 65 – col 8, line 8). It would have been obvious to one of ordinary skill in the art to modify Bang to use interleaving as taught by Yoon in order to prevent interference to other users.

As to claim 19, the apparatus of Bang would perform the claimed steps.

As to claims 2,20, note that Bang teaches multiplying by a predetermined coefficient (Bang see especially col 10, lines 50-60).

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As to claim 32, of course the total power is comprised of the power of the first and second signals.

As to claim 36, note that Bang's CDMA signal is of course a spread signal (col 3, lines 20-35).

As to claim 38, note that Bang teaches adding as well as reducing the power.

As to claims 37,40 note that Bang teaches using different spreading codes, one of which could be considered "common" (col 3, lines 40-65, col 11, line 10 – col 13, line 60).

As to claims 41,43, note that Bang teaches one of the signals being the pilot which is controlled to be lower in power (col 10, lines 50-60).

As to claim 39, note that the amount of power control would be a function of the number of streams controlled (col 12, line 44 – col 13, line 45).

Consider claim 5. Bang in view of Yoon as modified above fails to teach the communication apparatus further comprising: the first signal including a power control signal to control power of another apparatus. Note that it is well known in the art for a transmitter to control the power of a communicating radio with a power control signal in the forward transmission. Yoon also teaches a power control signal being included in the forward channel (Yoon see especially fig 2A, col 2, lines 15-35). It would have been obvious to one of ordinary skill in the art to further modify Bang to include a power control signal in order to ensure that the output power of the second station was not excessive.

***Allowable Subject Matter***

2. Claims 6-11,12-18,21-30 are allowed.

Consider claims 6,21. The nearest prior art as shown in Bang fails to teach a method and apparatus for spreading a plurality of transmission data by employing different spreading codes to output spread signals, synthesizing the plurality of spread signals with each other to output a synthesized signal; outputting a predetermined coefficient; multiplying the synthesized signal by the coefficient, and transmitting the signal output from the multiplying unit.

Consider claims 12. The nearest prior art as shown in Bang fails to teach a CDMA communication apparatus in which, with a plurality of transmission data each having a data signal and a pilot signal, the pilot signal is spread with a first spreading code, the data signal is spread with a second spreading code and all of the spread transmission data are added to each other and the added data is transmitted comprising: controlling the transmission power of the transmission data by a transmission power control unit in such a way the transmission power of the pilot signal is made substantially equal to the transmission power of the data signal and transmitting the transmission data with the power controlled by the transmission power control unit.

Consider claim 25. The nearest prior art as shown in Bang fails to teach a CDMA communication method and apparatus in which, with a plurality of transmission data each having a data signal and a pilot signal, the pilot signal is spread with a first spreading code, the data signal is spread with a second spreading code and all of the spread transmission data are added to each other and the added data is transmitted

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comprising: controlling the transmission power of the transmission data by a transmission power control unit in such a way the transmission power of the pilot signal is made substantially equal to the transmission power of the data signal and transmitting the transmission data with the power controlled by the transmission power control unit.

***Response to Amendment***

3. Applicant's arguments with respect to claims 1,2,4,5,19,20,32-43 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J Sobutka whose telephone number is 571-272-7887. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882.

8. The current fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

On July 15, 2005, the Central FAX Number will change to **571-273-8300**. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number. To give customers time to adjust to the new Central FAX Number, faxes sent to the old number (703-872-9306) will be routed to the new number until September 15, 2005.

After September 15, 2005, the old number will no longer be in service and **571-273-8300** will be the only facsimile number recognized for "centralized delivery".

**CENTRALIZED DELIVERY POLICY:** For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Philip Sobutka

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EDAN ORGAD  
PATENT EXAMINER/TELECOMM.

L.G. 7/2/05